

# WEST Search History

DATE: Monday, December 09, 2002

**Set Name Query**  
side by side

**Hit Count Set Name**  
result set

*DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*

L13	l9 and L12	8	L13
L12	herbicide\$	65261	L12
L11	l9 and L10	5	L11
L10	l1 or l5	9732	L10
L9	l2 same L8	491	L9
L8	hydrogen bond\$3	27146	L8
L7	L6 not l4	28	L7
L6	L5 same l2	29	L6
L5	sul\$2onylur\$6 or sul\$2onylcarbonyldi?mino or sul\$2onylaminocarbonylamino or (sul\$2onylaminocarbonyl amino) or (sul\$2onylamino (carbonylamino or (carbonyl amino))) or ur\$6sul\$2onyl\$ or carbonyldi?minosul\$2onyl\$ or aminocarbonylamino\$2onyl\$ or (aminocarbonyl aminosul\$2onyl\$) or (amino (carbonylamino\$2onyl\$ or (carbonyl aminosul\$2onyl\$))) or \$2carbamoysul\$2amoyl or (\$2carbamoyl \$2sul\$2amoyl) or sul\$2onyl near (urea\$1 or ureido or ureylene or uramino or carbonyldi?mino or aminocarbonylamino or (aminocarbonyl amino) or (amino (carbonylamino or (carbonyl amino))) )	9707	L5
L4	l1 same L2	2	L4
L3	l1 same L2	2	L3
L2	polyvinylalcohol or (polyvinyl alcohol) or pva	124058	L2
L1	iodosulfuron	52	L1

END OF SEARCH HISTORY

Print

[illegible]

**WEST****End of Result Set**

Generate Collection

Print

L4: Entry 2 of 2

File: USPT

Apr 3, 2001

DOCUMENT-IDENTIFIER: US 6211118 B1

TITLE: Herbicidal compositions

Detailed Description Text (10):

Two (2) parts by weight of Compound A, Compound B, Compound C, Compound D, Compound E, or Compound F, and 3 parts by weight of sulfosulfuron, flucarbazone, iodosulfuron or flupyrsulfuron are added to 40 parts by weight of an aqueous solution of 10% polyvinyl alcohol, and then emulsification dispersed by using a homogenizer until the average particle diameter thereof is 10 .mu.m or less. Subsequently, 55 parts by weight of water is added thereto, to achieve a concentrated emulsion formulation of the instant invention.

**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 10 of 28 returned.**☐ 1. Document ID: US 6461694 B1

L7: Entry 1 of 28

File: USPT

Oct 8, 2002

US-PAT-NO: 6461694

DOCUMENT-IDENTIFIER: US 6461694 B1

TITLE: Optical compensatory sheet comprising transparent support, orientation layer and optically anisotropic layer

DATE-ISSUED: October 8, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nishikawa; Hideyuki	Minami-ashigara			JP
Kawata; Ken	Minami-ashigara			JP

US-CL-CURRENT: 428/1.3; 349/117, 349/121, 428/1.31

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KIMC

☒ 2. Document ID: US 5703010 A

L7: Entry 2 of 28

File: USPT

Dec 30, 1997

US-PAT-NO: 5703010

DOCUMENT-IDENTIFIER: US 5703010 A

TITLE: Formulations of crop protection agents

DATE-ISSUED: December 30, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heinrich; Rudolf	Kelkeim			DE
Maier; Thomas	Frankfurt am Main			DE
Kocur; Jean	Hofheim am Taunus			DE
Schlicht; Rainer	Bad Camberg			DE

US-CL-CURRENT: 504/361; 424/408, 504/139, 504/231, 504/270, 504/272, 514/431, 514/952, 514/962

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KIMC

☐ 3. Document ID: US 5612280 A

L7: Entry 3 of 28

File: USPT

Mar 18, 1997

US-PAT-NO: 5612280

DOCUMENT-IDENTIFIER: US 5612280 A

TITLE: Thermosensitive recording material

DATE-ISSUED: March 18, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Takahashi; Yoshiyuki	Kawasaki			JP
Shirai; Ayako	Yokohama			JP
Segawa; Takako	Machida			JP
Toyofuku; Kunitaka	Sakura			JP

US-CL-CURRENT: 503/216; 503/225

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KIMC

☐ 4. Document ID: US 5602177 A

L7: Entry 4 of 28

File: USPT

Feb 11, 1997

US-PAT-NO: 5602177

DOCUMENT-IDENTIFIER: US 5602177 A

TITLE: Formulations of deltamethrin

DATE-ISSUED: February 11, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heinrich; Rudolf	Kelkheim			DE
Maier; Thomas	Frankfurt am Main			DE
Kocur; Jean	Hofheim am Taunus			DE
Schlicht; Rainer	Bad Camberg			DE

US-CL-CURRENT: 514/521; 514/772.2; 514/951

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KIMC

☐ 5. Document ID: US 5558228 A

L7: Entry 5 of 28

File: USPT

Sep 24, 1996

US-PAT-NO: 5558228

DOCUMENT-IDENTIFIER: US 5558228 A

TITLE: Water-soluble polymer packaging for delivery of incompatible crop protection chemicals

DATE-ISSUED: September 24, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jackisch; David A.	Wilmington	DE		
Styles; David A.	West Grove	PA		

US-CL-CURRENT: 206/524.7; 206/205, 206/219

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

RWC

☐ 6. Document ID: US 5351831 A

L7: Entry 6 of 28

File: USPT

Oct 4, 1994

US-PAT-NO: 5351831

DOCUMENT-IDENTIFIER: US 5351831 A

TITLE: Bag in a bag for containerization of toxic or hazardous material

DATE-ISSUED: October 4, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gouge; Samuel T.	Raleigh	NC		
Shue; James E.	Raleigh	NC		

US-CL-CURRENT: 206/524.7; 206/205, 424/409, 516/99

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

RWC

☐ 7. Document ID: US 5346068 A

L7: Entry 7 of 28

File: USPT

Sep 13, 1994

US-PAT-NO: 5346068

DOCUMENT-IDENTIFIER: US 5346068 A

TITLE: Containerization system

DATE-ISSUED: September 13, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gouge; Samuel T.	Raleigh	NC		
Shue; James E.	Raleigh	NC		

US-CL-CURRENT: 206/524.7; 206/205, 424/409

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☐ 8. Document ID: US 5323906 A

L7: Entry 8 of 28

File: USPT

Jun 28, 1994

US-PAT-NO: 5323906

DOCUMENT-IDENTIFIER: US 5323906 A

TITLE: Bag in a bag for containerization of toxic or hazardous material

DATE-ISSUED: June 28, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gouge; Samuel T.	Raleigh	NC		
Shue; James E.	Raleigh	NC		

US-CL-CURRENT: 206/524.7; 206/205, 424/409, 516/99

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☐ 9. Document ID: US 5253759 A

L7: Entry 9 of 28

File: USPT

Oct 19, 1993

US-PAT-NO: 5253759

DOCUMENT-IDENTIFIER: US 5253759 A

TITLE: Containerization system

DATE-ISSUED: October 19, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gouge; Samuel T.	Raleigh	NC		
Shue; James E.	Raleigh	NC		

US-CL-CURRENT: 206/524.7; 206/205, 206/568, 424/409, 504/358, 516/102, 516/108

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☐ 10. Document ID: US 5222595 A

L7: Entry 10 of 28

File: USPT

Jun 29, 1993

US-PAT-NO: 5222595

DOCUMENT-IDENTIFIER: US 5222595 A

TITLE: Bag in a bag for containerization of toxic or hazardous material

DATE-ISSUED: June 29, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gouge; Samuel T.	Raleigh	NC		
Shue; James E.	Raleigh	NC		

US-CL-CURRENT: 206/205; 206/524.7, 424/409, 516/102

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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L6 not l4

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**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 11 through 20 of 28 returned.**☐ 11. Document ID: US 5126504 A

L7: Entry 11 of 28

File: USPT

Jun 30, 1992

US-PAT-NO: 5126504

DOCUMENT-IDENTIFIER: US 5126504 A

TITLE: Electrophotographic copying material with an alkali soluble polyurethane graft copolymer binder

DATE-ISSUED: June 30, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mueller-Hess; Waltraud	Wiesbaden			DE
Mohr; Dieter	Budenheim			DE
Kroggel; Matthias	Kelkheim			DE

US-CL-CURRENT: 430/96; 430/66, 430/906

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Sequences</a>	<a href="#">Attachments</a>
<a href="#">Draw Desc</a>	<a href="#">Image</a>								

[KMC](#)☐ 12. Document ID: US 4933178 A

L7: Entry 12 of 28

File: USPT

Jun 12, 1990

US-PAT-NO: 4933178

DOCUMENT-IDENTIFIER: US 4933178 A

TITLE: Metal-based antimicrobial coating

DATE-ISSUED: June 12, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Capelli; Christopher C.	Kenosha	WI		

US-CL-CURRENT: 424/403; 424/405, 424/422, 424/423, 424/424, 424/617, 424/618, 523/112, 523/113, 523/122, 604/265, 604/266

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Sequences</a>	<a href="#">Attachments</a>
<a href="#">Draw Desc</a>	<a href="#">Image</a>								

[KMC](#)

☒ 13. Document ID: JP 10287503 A

L7: Entry 13 of 28

File: JPAB

Oct 27, 1998

PUB-NO: JP410287503A

DOCUMENT-IDENTIFIER: JP 10287503 A

TITLE: AQUEOUS SUSPENSION PREPARATION DIRECTLY SCATTERED ON FLOODING PADDY FIELD

PUBN-DATE: October 27, 1998

## INVENTOR-INFORMATION:

NAME

COUNTRY

NABEYA, YOSHIHIKO

KUROTSU, YUICHI

AKIYAMA, MASAKI

YONEMURA, SHINJI

INT-CL (IPC): A01 N 25/04; A01 N 43/10; A01 N 47/36

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 14. Document ID: JP 10279406 A

L7: Entry 14 of 28

File: JPAB

Oct 20, 1998

PUB-NO: JP410279406A

DOCUMENT-IDENTIFIER: JP 10279406 A

TITLE: DIRECTLY SPRINKLING AQUEOUS SUSPENSION PREPARATION FOR FLOODED PADDY FIELD FILLED

PUBN-DATE: October 20, 1998

## INVENTOR-INFORMATION:

NAME

COUNTRY

NABEYA, YOSHIHIKO

KUROTSU, YUICHI

AKIYAMA, MASAKI

YONEMURA, SHINJI

INT-CL (IPC): A01 N 43/54; A01 N 25/04

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☐ 15. Document ID: JP 10273405 A

L7: Entry 15 of 28

File: JPAB

Oct 13, 1998

PUB-NO: JP410273405A

DOCUMENT-IDENTIFIER: JP 10273405 A  
TITLE: AQUEOUS SUSPENDED PREPARATION FOR DIRECT APPLICATION TO PADDY FIELD UNDER INUNDATION

PUBN-DATE: October 13, 1998

INVENTOR-INFORMATION:

NAME

COUNTRY

NABEYA, YOSHIHIKO

KUROTSU, YUICHI

AKIYAMA, MASAKI

YONEMURA, SHINJI

INT-CL (IPC): A01 N 47/28; A01 N 25/04

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

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☐ 16. Document ID: JP 10265309 A

L7: Entry 16 of 28

File: JPAB

Oct 6, 1998

PUB-NO: JP410265309A

DOCUMENT-IDENTIFIER: JP 10265309 A

TITLE: WATER-BASED SUSPENSION PREPARATION DIRECTLY APPLICABLE TO FLOODED RICE PADDIES

PUBN-DATE: October 6, 1998

INVENTOR-INFORMATION:

NAME

COUNTRY

NABEYA, YOSHIHIKO

KUROTSU, YUICHI

AKIYAMA, MASAKI

YONEMURA, SHINJI

INT-CL (IPC): A01 N 47/36; A01 N 25/04; A01 N 25/10

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 17. Document ID: JP 06305253 A

L7: Entry 17 of 28

File: JPAB

Nov 1, 1994

PUB-NO: JP406305253A

DOCUMENT-IDENTIFIER: JP 06305253 A

TITLE: THERMOSENSITIVE RECORDING MATERIAL

PUBN-DATE: November 1, 1994

INVENTOR-INFORMATION:

NAME COUNTRY  
MORITA, YASUYOSHI  
MURATA, TATSUYA

US-CL-CURRENT: 503/219  
INT-CL (IPC): B41M 5/26; B41M 5/30

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

K/MC

☐ 18. Document ID: JP 04297404 A

L7: Entry 18 of 28

File: JPAB

Oct 21, 1992

PUB-NO: JP404297404A  
DOCUMENT-IDENTIFIER: JP 04297404 A  
TITLE: HERBICIDAL TABLET OR CAPCULE FOR PADDY FIELD

PUBN-DATE: October 21, 1992

## INVENTOR-INFORMATION:

NAME COUNTRY  
OGAWA, YASUO  
KIMURA, FUMIO  
KIMURA, AKIRA  
MAEDA, KAZUYUKI  
MIYAJI, MIKIO  
NAKAGAWA, AKIRA  
YOSHIKAWA, NOBORU

INT-CL (IPC): A01N 47/28; A01N 25/16; A01N 25/30; A01N 25/34

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

K/MC

☒ 19. Document ID: JP 10287503 A JP 3270825 B2

L7: Entry 19 of 28

File: DWPI

Oct 27, 1998

DERWENT-ACC-NO: 1999-018250  
DERWENT-WEEK: 200225  
COPYRIGHT 2002 DERWENT INFORMATION LTD  
TITLE: Aqueous suspension formulation for paddy field filled with water - comprises e.g. sulphonyl-urea type herbicidal active ingredient and/or herbicidal active ingredient which has Echinochloa-cidal activity

PRIORITY-DATA: 1997JP-0044890 (February 14, 1997)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10287503 A	October 27, 1998		011	A01N025/04
JP 3270825 B2	April 2, 2002		009	A01N025/04

INT-CL (IPC): A01 N 25/04; A01 N 43/10; A01 N 47/36

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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K/MC

☒ 20. Document ID: JP 10279406 A JP 3270820 B2

L7: Entry 20 of 28

File: DWPI

Oct 20, 1998

DERWENT-ACC-NO: 1999-005100

DERWENT-WEEK: 200225

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Herbicidal aqueous suspension for direct application in flooded paddy fields  
- comprises bensulfuron methyl, thenylchlor and cyhalofop butyl as active  
ingredients, used e.g. for pre- and post-transplanting treatment of rice

PRIORITY-DATA: 1997JP-0097921 (April 2, 1997)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10279406 A	October 20, 1998		006	A01N043/54
JP 3270820 B2	April 2, 2002		006	A01N043/54

INT-CL (IPC): A01 N 25/04; A01 N 37/10; A01 N 43/06; A01 N 43/54; A01 N 37:10; A01 N 43/54; A01 N 43:06

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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**Search Results - Record(s) 21 through 28 of 28 returned.**☒ 21. Document ID: JP 10273405 A JP 3270819 B2

L7: Entry 21 of 28

File: DWPI

Oct 13, 1998

DERWENT-ACC-NO: 1999-012689

DERWENT-WEEK: 200225

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Aqueous suspension formulation for paddy field - comprises e.g.  
sulphonyl-urea type herbicidal active ingredient and/or herbicidal active ingredient  
having Echinochloa crus-galli killing activity

PRIORITY-DATA: 1997JP-0042818 (February 13, 1997)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10273405 A	October 13, 1998		008	A01N047/28
JP 3270819 B2	April 2, 2002		007	A01N047/28

INT-CL (IPC): A01 N 25/04; A01 N 47/28

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☒ 22. Document ID: JP 10265309 A

L7: Entry 22 of 28

File: DWPI

Oct 6, 1998

DERWENT-ACC-NO: 1998-589603

DERWENT-WEEK: 199903

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TITLE: Aqueous suspension formulation - useful for directly applying to paddy field  
filled with water

PRIORITY-DATA: 1997JP-0091326 (March 27, 1997)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10265309 A	October 6, 1998		005	A01N047/36

INT-CL (IPC): A01 N 25/04; A01 N 25/10; A01 N 47/36; A01 N 43:10; A01 N 47/36

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 23. Document ID: JP 08324132 A

L7: Entry 23 of 28

File: DWPI

Dec 10, 1996

DERWENT-ACC-NO: 1997-082466

DERWENT-WEEK: 199708

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TITLE: Thermally sensitive recording material prepn. with reduced fogging of substrate - by applying dispersion of colour forming agent comprising e.g. 4,4'-bis(p-tolyl:sulphonyl-amino:carbonylamino) di:phenyl:methane and leuco dye to support

PRIORITY-DATA: 1995JP-0138023 (June 5, 1995)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 08324132 A	December 10, 1996		006	B41M005/30

INT-CL (IPC): B41 M 5/26; B41 M 5/30

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMDC
Draw Desc	Image									

☐ 24. Document ID: JP 08062803 A

L7: Entry 24 of 28

File: DWPI

Mar 8, 1996

DERWENT-ACC-NO: 1996-192321

DERWENT-WEEK: 199622

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Dye-fixing element forming colour image of good light fastness - contains polymer modulant contg. imidazole deriv., modified polyvinyl alcohol and latex contg. butadiene component

PRIORITY-DATA: 1994JP-0219601 (August 23, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 08062803 A	March 8, 1996		062	G03C008/26

INT-CL (IPC): G03 C 8/26; G03 C 8/52; G03 C 8/56

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMDC
Draw Desc	Clip Img	Image								

☐ 25. Document ID: JP 07290834 A

L7: Entry 25 of 28

File: DWPI

Nov 7, 1995

DERWENT-ACC-NO: 1996-016402

DERWENT-WEEK: 199602

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TITLE: Heat sensitive recording medium - comprises recording layer of coloured or colourless basic dye, developer and a poly:vinyl alcohol

PRIORITY-DATA: 1994JP-0091951 (April 28, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 07290834 A	November 7, 1995		008	B41M005/30

INT-CL (IPC): B41 M 5/26; B41 M 5/30

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 26. Document ID: JP 06305253 A

L7: Entry 26 of 28

File: DWPI

Nov 1, 1994

DERWENT-ACC-NO: 1995-018889

DERWENT-WEEK: 199605

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TITLE: Heat-sensitive recording material with even recording, used for e.g. ticket - has heat sensitive colouring layer contg. electron donor colourless pre-dye, 4,4'-bis(p-toluene-sulphonyl-amino:carbonyl:amino) di:phenylmethane, etc.

PRIORITY-DATA: 1993JP-0101396 (April 27, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 06305253 A	November 1, 1994		006	B41M005/26

INT-CL (IPC): B41M 5/26; B41M 5/30

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 27. Document ID: JP 63203393 A

L7: Entry 27 of 28

File: DWPI

Aug 23, 1988

DERWENT-ACC-NO: 1988-275883

DERWENT-WEEK: 198839

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TITLE: Heat transfer sheet providing recording image with good fastness - contg. specific styrene series dye as dye-carrier layer, on base e.g. of polyester

PRIORITY-DATA: 1987JP-0035758 (February 20, 1987)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 63203393 A	August 23, 1988		008	

INT-CL (IPC): B41M 5/26; C09B 23/14

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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☐ 28. Document ID: JP 61018942 A



L7: Entry 28 of 28

File: DWPI

Jan 27, 1986

DERWENT-ACC-NO: 1986-066158

DERWENT-WEEK: 198610

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TITLE: Heat developable light-sensitive material - having on support silver halide, binder and di:sulphone hardener

PRIORITY-DATA: 1984JP-0138845 (July 4, 1984)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 61018942 A	January 27, 1986		019	

INT-CL (IPC): G03C 1/30; G03C 7/00

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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L7: Entry 2 of 28

File: USPT

Dec 30, 1997

DOCUMENT-IDENTIFIER: US 5703010 A

TITLE: Formulations of crop protection agents

Detailed Description Text (10):

100 g of a polyvinyl alcohol which has been prepared by partial hydrolysis of polyvinyl acetate and which has a viscosity of 3 cP (measured in a 4% strength aqueous solution at 20.degree. C.) and a degree of hydrolysis of 83 mol % are dissolved in 600 g of water, and 50 g of a polyvinyl alcohol which has been prepared in the same manner and has a viscosity of 4 cP and a degree of hydrolysis of 88 mol % are slowly added with vigorous stirring. 20 g of 1.0 a sulfonylurea herbicide DPXL 5300, which has previously been ground in a bead mill to a particle size of 1-5 .mu.m, are then added, and the aqueous phase is homogenized. A solution of 60 g of fenoxaprop-P-ethyl and 30 g of fenchlorazole in 260 g of methylnaphthalene is then run into this aqueous phase while continuing stirring, and the speed of the stirrer is then increased so that the oily droplets which form in the aqueous phase have an average diameter of 5-10 .mu.m.

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L7: Entry 13 of 28

File: JPAB

Oct 27, 1998

DOCUMENT-IDENTIFIER: JP 10287503 A

TITLE: AQUEOUS SUSPENSION PREPARATION DIRECTLY SCATTERED ON FLOODING PADDY FIELD

Abstract (2):

SOLUTION: This aqueous suspension preparation directly scattered on flooding paddy field comprises (A) 0.1-60 wt.% agrochemical active ingredient of a sulforlylurea-based herbicidal active ingredient [e.g. methyl- $\alpha$ -(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-o-toluate (bensulfuron-methyl)] and/or a herbicidal active ingredient having terminating activities against *Panicum crus-galli* (e.g. thenylchlor), (B) 0.1-20 wt.% polyvinyl alcohol having  $\geq 2,000$  average polymerization degree and 69-90 mol.% saponification degree, (C) 1-60 wt.% high boiling point solvent (e.g. ditridecyl phthalate), (D) water, and optionally (E) a thickener, an antifoamer, an antifreezing agent, a preservative and fungicidal agent, a stabilizer of the herbicidal active ingredient, etc.

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L7: Entry 16 of 28

File: JPAB

Oct 6, 1998

DOCUMENT-IDENTIFIER: JP 10265309 A

TITLE: WATER-BASED SUSPENSION PREPARATION DIRECTLY APPLICABLE TO FLOODED RICE  
PADDIESAbstract (2):

SOLUTION: This water-based suspension preparation that is directly applicable to flooded rice paddies contains, as active ingredients, methyl  $\alpha$ -(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-o-toluate and 2-chloro-N-(3-methoxy-2-thenyl)-2',6'-dimethylacetanilide, in addition, polyvinyl alcohol with an average degree of polymerization of  $\leq 1,000$  and a degree of saponification of 78-83 mol% and water.

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L7: Entry 19 of 28

File: DWPI

Oct 27, 1998

DERWENT-ACC-NO: 1999-018250

DERWENT-WEEK: 200225

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Aqueous suspension formulation for paddy field filled with water - comprises e.g. sulphonyl-urea type herbicidal active ingredient and/or herbicidal active ingredient which has Echinochloa-cidal activity

Basic Abstract Text (1):

Aqueous suspension formulation for a paddy field filled with water comprises: (a) a sulphonylurea type herbicidal active ingredient and/or a herbicidal active ingredient which has Echinochloa-cidal activity; (b) polyvinyl alcohol; (c) a solvent having a high boiling point; and (d) water.

**WEST**

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L7: Entry 20 of 28

File: DWPI

Oct 20, 1998

DERWENT-ACC-NO: 1999-005100

DERWENT-WEEK: 200225

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Herbicidal aqueous suspension for direct application in flooded paddy fields  
- comprises bensulfuron methyl, thenylchlor and cyhalofop butyl as active ingredients, used e.g. for pre- and post-transplanting treatment of rice

Basic Abstract Text (1):

Herbicidal aqueous suspension for direct application in flooded paddy fields comprises: (A) methyl- alpha - (4,6-dimethoxypyrimidin-2-ylcarbamoyl-lsulphamoyl)-o-toluate (bensulfuron methyl), 2-chloro-N- (3-methoxy-2-thenyl)-2',6'-dimethylacetoanilide (thenylchlor) and butyl-(R)-2-[4-(4-cyano-2--fluorophenoxy)phenoxy]propionate (cyhalofop butyl) as active ingredients; (B) polyvinylalcohol having an average polymerisation degree of < 1000 and a saponification degree of 78-83 mol%; (C) a high b.pt. solvent; and (D) water.

**WEST**

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L7: Entry 21 of 28

File: DWPI

Oct 13, 1998

DERWENT-ACC-NO: 1999-012689

DERWENT-WEEK: 200225

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TITLE: Aqueous suspension formulation for paddy field - comprises e.g. sulphonyl-urea type herbicidal active ingredient and/or herbicidal active ingredient having Echinochloa crus-galli killing activity

Basic Abstract Text (1):

Aqueous suspension formulation comprises sulphonylurea type herbicidal active ingredient and/or a herbicidal active ingredient having Echinochloa crus-galli killing activity, polyvinyl alcohol and water.

**WEST**

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L7: Entry 22 of 28

File: DWPI

Oct 6, 1998

DERWENT-ACC-NO: 1998-589603

DERWENT-WEEK: 199903

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Aqueous suspension formulation - useful for directly applying to paddy field filled with water

Basic Abstract Text (1):

An aqueous suspension formulation comprises methyl- alpha - (4,6-dimethoxypyrimidine-2-ylcarbamoylsulphamoyl)-o-toluate (I) and 2-chloro-N-(3-methoxy-2-tenyl)-2',6'-dimethylacetoanilide as agricultural active ingredients, and further comprises polyvinyl alcohol having average polymerisation degree of up to 1000 and saponification degree of 78 - 83 mol% and water.



**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 5 of 5 returned.**☐ 1. Document ID: US 20020102502 A1

L11: Entry 1 of 5

File: PGPB

Aug 1, 2002

PGPUB-DOCUMENT-NUMBER: 20020102502  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020102502 A1

TITLE: Thermal development photosensitive material

PUBLICATION-DATE: August 1, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Fukui, Kouta	Minami-Ashigara-shi		JP	
Yoshioka, Yasuhiro	Minami-Ashigara-shi		JP	

US-CL-CURRENT: [430/350](#); [430/618](#), [430/944](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KWC](#)☐ 2. Document ID: US 20020076663 A1

L11: Entry 2 of 5

File: PGPB

Jun 20, 2002

PGPUB-DOCUMENT-NUMBER: 20020076663  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020076663 A1

TITLE: HEAT-DEVELOPABLE RECORDING MATERIAL

PUBLICATION-DATE: June 20, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Fujikura, Sadao	Shizuoka		JP	
Haraoka, Hiroshi	Shizuoka		JP	

US-CL-CURRENT: [430/533](#); [430/620](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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[KWC](#)☐ 3. Document ID: US 20020068245 A1

L11: Entry 3 of 5

File: PGPB

Jun 6, 2002

PGPUB-DOCUMENT-NUMBER: 20020068245  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020068245 A1

TITLE: Photothermographic material and heat development process

PUBLICATION-DATE: June 6, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Yoshioka, Yasuhiro	Minami Ashigara-shi		JP	
Oya, Toyohisa	Minami Ashigara-shi		JP	
Yamada, Sumito	Minami Ashigara-shi		JP	

US-CL-CURRENT: 430/350; 430/614, 430/620

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KVMC

☐ 4. Document ID: US 20020042345 A1

L11: Entry 4 of 5

File: PGPB

Apr 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020042345  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20020042345 A1

TITLE: Combination of crop protection agents with hydrogen bond-forming polymers

PUBLICATION-DATE: April 11, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kocur, Jean	Hofheim		DE	
Frisch, Gerhard	Wehrheim		DE	
Wurtz, Jochen	Bingen am Rhein		DE	
Bickers, Udo	Wietmarschen		DE	
Hacker, Erwin	Hochheim		DE	
Huff, Hans Philipp	Eppstein		DE	
Schnabel, Gerhard	Elsenfeld		DE	

US-CL-CURRENT: 504/211; 504/358, 514/772, 514/964

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KVMC

☐ 5. Document ID: US 6413705 B1

L11: Entry 5 of 5

File: USPT

Jul 2, 2002

US-PAT-NO: 6413705  
DOCUMENT-IDENTIFIER: US 6413705 B1

TITLE: Heat-developable recording material

DATE-ISSUED: July 2, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fujikura; Sadao	Shizuoka			JP
Haraoka; Hiroshi	Shizuoka			JP

US-CL-CURRENT: 430/496; 430/533, 430/619, 430/950

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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**WEST****End of Result Set**

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L11: Entry 5 of 5

File: USPT

Jul 2, 2002

DOCUMENT-IDENTIFIER: US 6413705 B1

TITLE: Heat-developable recording material

Brief Summary Text (180):

The alkyl group represented by Q may have a substituent. Any substituent can be used so far as the substituent gives no harmful influence to photographic properties. Examples of the substituent include a halogen atom (a fluorine atom, a chlorine atom, a bromine atom or an iodine atom), an alkyl group, an alkenyl group, an alkynyl group, an aryl group, a heterocyclic group (including an N-substituted heterocyclic group having nitrogen, e.g., a morpholino group), an alkoxy carbonyl group, an aryloxy carbonyl group, a carbamoyl group, an imino group, an imino group substituted at the N atom, a thiocarbonyl group, a carbazoyl group, a cyano group, a thiocarbamoyl group, an alkoxy group, an aryloxy group, a heterocyclicoxy group, an acyloxy group, an (alkoxy or aryloxy) carbonyloxy group, a sulfonyloxy group, an acylamide group, a sulfonamide group, a ureido group, a thioureido group, an imido group, an (alkoxy or aryloxy) carbonylamino group, a sulfamoylamino group, a semicarbazide group, a thiosemicarbazide group, an (alkyl or an aryl) sulfonylureido group, a nitro group, an (alkyl or an aryl) sulfonyl group, a sulfamoyl group, a group having a structure of phosphoric acid amide or phosphoric acid ester, a silyl group, a carboxyl group or its salt, a sulfo group or its salt, a phosphoric acid group, a hydroxy group and a tertiary ammonium group. These substituents may further be substituted by these substituents.

Detailed Description Text (66):

10 kg of water was added to 10 kg of Hydrogen Bonding Type Compound-1 [tri(4-tert-butylphenyl) phosphine oxide and 20 kg of a 10 wt % aqueous solution of modified polyvinylalcohol (Poval MP203 manufactured by Kuraray Co., Ltd.). Then, the mixture was thoroughly mixed to be a slurry. The slurry was fed by means of a diaphragm pump into a horizontal type beads mill (UVM-2 manufactured by Imex Co., Ltd.) filled with zirconia beads having an average diameter of 0.5 mm, and dispersed for 3 hours 30 minutes. Then, 0.2 g of sodium salt of benzoisothiazolinone and water were added to the dispersion so as to make the concentration of the hydrogen bonding type compound 22 wt %, thereby Hydrogen Bonding Type Compound-1 Dispersion was obtained. The particles of the hydrogen bonding type compound included in the hydrogen bonding type compound dispersion thus obtained had a median particle diameter of 0.35 .mu.m and a maximum particle diameter of 1.5 .mu.m or less. The hydrogen bonding type compound dispersion obtained was filtrated with a polypropylene filter having a pore diameter of 3.0 .mu.m to remove foreign matters like dusts, and then stored. The structure of Hydrogen Bonding Type Compound-1 used for the preparation is shown below. ##STR24##

**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 8 of 8 returned.**☐ 1. Document ID: US 20020048751 A1

L13: Entry 1 of 8

File: PGPB

Apr 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020048751

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020048751 A1

TITLE: SENSOR COMPRISING AN OLIGOMER BINDING LAYER AND METHOD OF MAKING SUCH SENSOR AND ARRAYS OF SUCH SENSORS

PUBLICATION-DATE: April 25, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
HUYBERECHTS, GUIDO	MELSBROEK		BE	
JORDENS, SVEN	HERK-DE-STAD		BE	

US-CL-CURRENT: 435/6

Full	Title	Citation	Front	Review	Classification	Data	Reference	Sequences	Attachments	Full
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☐ 2. Document ID: US 20020042345 A1

L13: Entry 2 of 8

File: PGPB

Apr 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020042345

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020042345 A1

TITLE: Combination of crop protection agents with hydrogen bond-forming polymers

PUBLICATION-DATE: April 11, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Kocur, Jean	Hofheim		DE	
Frisch, Gerhard	Wehrheim		DE	
Wurtz, Jochen	Bingen am Rhein		DE	
Bickers, Udo	Wietmarschen		DE	
Hacker, Erwin	Hochheim		DE	
Huff, Hans Philipp	Eppstein		DE	
Schnabel, Gerhard	Elsfeld		DE	

US-CL-CURRENT: 504/211; 504/358, 514/772, 514/964

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 3. Document ID: US 5779960 A

L13: Entry 3 of 8

File: USPT

Jul 14, 1998

US-PAT-NO: 5779960

DOCUMENT-IDENTIFIER: US 5779960 A

TITLE: Algal plastics

DATE-ISSUED: July 14, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berlowitz-Tarrant; Laurence	Harvard	MA		
Tukumo; Toshimasa	Tokyo			JP
Shivkumar; Satya	Worcester	MA		

US-CL-CURRENT: 264/176.1; 264/209.1, 264/211, 264/211.1, 264/211.11, 524/47,  
525/54.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

KMC

☒ 4. Document ID: US 5693411 A

L13: Entry 4 of 8

File: USPT

Dec 2, 1997

US-PAT-NO: 5693411

DOCUMENT-IDENTIFIER: US 5693411 A

TITLE: Binders for binding water soluble particles to fibers

DATE-ISSUED: December 2, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hansen; Michael R.	Seattle	WA		
Young, Sr.; Richard H.	Renton	WA		

US-CL-CURRENT: 442/417; 428/378, 442/327

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC

☐ 5. Document ID: US 5352709 A

L13: Entry 5 of 8

File: USPT

Oct 4, 1994

US-PAT-NO: 5352709

DOCUMENT-IDENTIFIER: US 5352709 A

TITLE: Algal plastics

DATE-ISSUED: October 4, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tarrant; Laurence B.	Harvard	MA		
Tokuno; Toshimasa	Tokyo			JP
Shivkumar; Satya	Worcester	MA		

US-CL-CURRENT: 521/84.1; 521/109.1, 524/9, 536/3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMNC
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☐ 6. Document ID: US 5075427 A

L13: Entry 6 of 8

File: USPT

Dec 24, 1991

US-PAT-NO: 5075427

DOCUMENT-IDENTIFIER: US 5075427 A

TITLE: Polymer surface modification using aqueous stable diazo solution

DATE-ISSUED: December 24, 1991

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kang; Uan G.	Ann Arbour	MI		
Raksis; Joseph W.	Columbia	MD		
Kehr; Clifton L.	Silver Spring	MD		
Ferrin, Jr.; Clifford A.	Baltimore	MD		

US-CL-CURRENT: 534/559; 525/376, 534/560, 534/561, 8/664

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMNC
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☐ 7. Document ID: US 4692494 A

L13: Entry 7 of 8

File: USPT

Sep 8, 1987

US-PAT-NO: 4692494

DOCUMENT-IDENTIFIER: US 4692494 A

TITLE: Water soluble films of polyvinyl alcohol and polyacrylic acid and packages comprising same

DATE-ISSUED: September 8, 1987

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sonenstein; Gerard G.	Piscataway	NJ		

US-CL-CURRENT: 525/57; 524/377, 524/388

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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☐ 8. Document ID: US 4481326 A

L13: Entry 8 of 8

File: USPT

Nov 6, 1984

US-PAT-NO: 4481326

DOCUMENT-IDENTIFIER: US 4481326 A

TITLE: Water soluble films of polyvinyl alcohol polyvinyl pyrrolidone

DATE-ISSUED: November 6, 1984

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sonenstein; Gerard G.	Piscataway	NJ		

US-CL-CURRENT: 524/377; 525/57

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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L13: Entry 1 of 8

File: PGPB

Apr 25, 2002

DOCUMENT-IDENTIFIER: US 20020048751 A1

TITLE: SENSOR COMPRISING AN OLIGOMER BINDING LAYER AND METHOD OF MAKING SUCH SENSOR AND ARRAYS OF SUCH SENSORS

Summary of Invention Paragraph (4):

[0002] Sensors and biosensors are known in the art. A biosensor can be defined as a system that can determine the existence or the concentration of a certain analyte in a sample by translating molecular recognition of said analyte ultimately into an electrical signal by means of a translation system. Biosensors can be used for any kind of analyte that can be detected by biological means. Most important is the use for detecting and/or quantifying for instance metabolites, drugs, proteins, antigen-antibody interactions, i.e. metabolite detection and affinity and immunosensing in general. For instance, detecting glucose in a diabetes patient's blood is of vital importance, detection of possibly life-threatening micro-organisms in food enhances food safety, detection and quantification of pollutants like CO, herbicides, chemicals and heavy metals are necessary to find and decontaminate polluted areas.

Summary of Invention Paragraph (13):

[0011] In the prior art, polymers are used to immobilise biomolecules that can recognise an analyte. The polymers are bound to an electrode surface of a sensor. Polymers can provide the necessary sites to induce adsorption by weak forces such as Van der Waals forces, dipole-dipole interactions and hydrogen bonds. Further, polymers can provide a matrix in which said biomolecules can be trapped. Polymers that are useful for this purpose are amongst many others PVA (poly(vinylalcohol)), PVC (poly(vinylchloride)), PAA (poly(acrylamide)) and PU (polyurethane). This solution provides only a slow response time, since analytes have to diffuse through the matrix to the biomolecules to be detectable.

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L13: Entry 3 of 8

File: USPT

Jul 14, 1998

DOCUMENT-IDENTIFIER: US 5779960 A

TITLE: Algal plastics

Brief Summary Text (19):

Moreover, some of these filamentous algae, such as *Cladophora glomerata* (L.) Kutzing, have become major ecological pests, reaching massive nuisance proportions as a result of eutrophication caused by pollutants in effluent from industry, agriculture and urban sewage. The organism adversely affects navigation, recreation, water quality, and property values. 30-percent of the aquatic herbicides used in the U.S. are for control of this pest. In addition to the benefits derived from the use of *C. glomerata* as a biodegradable replacement for polystyrene resins in such applications as foamed packing materials, its industrial use further represents an opportunity for cost effective, ecologically responsible pest control. Furthermore, some of the algae useful in generating the algal plastics of this invention may be grown in waste streams and effluent ponds from industrial and domestic waste disposal, and present an opportunity for a new renewable industrial resource to be grown in habitats not currently exploited.

Brief Summary Text (91):

Stabilization of the foam as a cellular plastic can be accomplished as simply as drying the foam. The interlocking of the algal fibers, both mechanically and by hydrogen bonding, can act to give substantial dimension stability to the final foamed plastic. To increase strength and stability of the resulting algal plastic, glues and adhesives can be added to the algal suspension prior to whipping. For instance, the fibers can be coated with a low melting polymer (for example, polyvinyl alcohol), and a crosslinking agent or, alternatively, an adhesive dissolved in a solvent. Fusion occurs with contact between "tacky" fibers and the cellular structure of the foam can be maintained. In some instances, because of surface tension and capillary effects, the coated substance may migrate to the ends of the fiber and produce an anchored network.

**WEST**

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L13: Entry 4 of 8

File: USPT

Dec 2, 1997

DOCUMENT-IDENTIFIER: US 5693411 A

TITLE: Binders for binding water soluble particles to fibers

Detailed Description Text (21):

The list in Table I is by no means exhaustive as it can be readily determined for each type of particle whether it is capable of forming a hydrogen bond or a coordinate covalent bond. All or most of the particles are non-absorbent and are not superabsorbent polymers. By superabsorbent particles it is meant polymers that swell on exposure to water and form a hydrated gel (hydrogel) by absorbing large amounts of water. Superabsorbents are defined herein as materials that exhibit the ability to absorb large quantities of liquid, i.e., in excess of 10 to 15 parts of liquid per part thereof. These superabsorbent materials generally fall into three classes, namely starch derivatives and modified hydrophilic polyacrylates. Examples of such absorbent polymers are hydrolyzed starch-acrylonitrile graft copolymer, a neutralized starch-acrylic acid graft copolymer, a saponified acrylic acid ester-vinyl acetate copolymer, a hydrolyzed acrylonitrile copolymer or acrylamide copolymer, a modified cross-linked polyvinyl alcohol, a neutralized self-crosslinking polyacrylic acid, a crosslinked polyacrylate salt, carboxylated cellulose, and a neutralized crosslinked isobutylene-maleic anhydride copolymer.

Detailed Description Paragraph Table (1):

TABLE I	Function	Particulates For Binding Name
	absorbent acid (EDTA) disodium salt of EDTA Chelator	Ethylenediaminetetraacetic Odor
	absorbent/pH modifier Acarbose Antidiabetic	Sodium bicarbonate Odor
	Acenocoumarol, sodium salt Anticoagulant	Acephylline Piperazine Bronchodilator
	Analgesic Acetyllecine Antivertigo Monoethanolamine agent	Acetaminophen
	Acitretin Antipsoriatic Acranil Antiprotozoal (Giardia)	Acridine Violet 7B Dye/Stain
	Actaplanins Growth stimulant Algestone	Acetophenide Antiacne Algin Hemostatic
	Almagate Antacid (-)-Ambroxide Fragrance	Ambucaine hydrochloride Local anesthetic
	Amodiaquin Antimalarial Anabasine hydrochloride	Insecticide o-Anisaldehyde Fragrance
	Anisomycin hydrochloride Topical antitrichomonal	Aralkonium chloride Antiseptic,
	germicide Asiaticoside Dermatide, wounds, burns	Aspartame Non-nutritive sweetener
	Azidoamphenicol Antimicrobial in eye infections	Bebeerine Antimalarial Potassium
	benzoate Preservative, antifungal Benzoyl peroxide	Dermatide, antiacne Benzylidene
	acetone Fragrance Bidrin Insecticide	Biphenamine hydrochloride Antiseborrheic
	Bishydroxycoumarin Anticoagulant Bismuth tribromophenate	Topical antiseptic
	Blasticidin S hydrochloride Antimicrobial	Bromocresyl green Indicator Bromophenol
	blue Indicator Butathamine hydrochloride Anesthetic	Caffeine hydrochloride CNS
	Stimulant Calcium ascorbate Vitamin C/Calcium source	Calcium bisulfite Germicide
	Calcium thioglycollate Depilatory Carbachol	Ophthalmic parasympathomimetic Carbowax
	Ointment base Cetalkonium chloride Antibacterial	Cethoxonium bromide Antiseptic
	Chartreusin Antimycobacterial Chloramine-T	Topical antiseptic Cinnamic acid
	Fragrance Cotarnine chloride Hemostatic	Demercarium bromide Topical antiglaucoma
	D-2-deoxyribose DNA synthesis Dequalinium chloride	Antiseptic Dermostatin Anti
	fungal Dexamethasone Glucocorticoid Diacetone	acrylamide Mfr coatings, adhesives
	2,4-Diamino-6- Indicator of hydroxypyrimidine	nitrites/nitrites 2,4-Diaminophenol
	Photographic dihydrochloride developer	Diamthazole dihydrochloride Antifungal
	Diatrizoate sodium Diagnostic aid Dibekacin sulfate	Antibacterial Disodium 4',5'-
	FDA approved dibromofluorescein dye 3,5-Dibromo-4-	Topical hydroxybenzenesulfonic
	acid, disinfectant sodium salt Dibromopropamide	Cosmetic preservative Diflorasone
	Topical anti-inflammatory Dihydroxyacetone	Artificial tanning agent Diisobutyl

● sodium Wetting agent/ sulfosuccinate detergent Dikegulac Plant growth regulator Dimethisoquin Topical anesthetic Diphenicillin sodium Antibacterial Diphetarsone Antiamebic Dipyrone Analgesic, antipyretic Diquat dibromide Herbicide, defoliant Dodine Fungicide Domiphen bromide Topical anti-infective Dulcin Non-nutritive sweetener Dymixal .RTM. Topical burn treatment Ecognidine Topical anesthetic Edetic acid Antioxidant Edoxudine Antiviral Ellagic acid Hemostatic Endothal Herbicide, defoliant Eosine I bluish Dye Eosine yellowish Cosmetic dye Erythrosine Food dye Esculin Skin protectant Ethacridine Antiseptic Ethambutol hydrochloride Antibacterial (tuberculostatic) Ethamsylate Hemostatic Ethylidene dicoumarol Anticoagulant Ethylstibamine Antiprotozoal Euprocin dihydrochloride Topical anesthetic Fast green FCF Food coloring Fenticonazole nitrate Topical antifungal Ferric albuminate Hematinic Ferric chloride hexahydrate Astringent, styptic Ferric formate Silage preservative Ferrulic acid, sodium salt Food preservative Fluorescein, disodium salt Diagnostic aid Fluoridamid Plant growth retardant Forminitrazol Antiprotozoal (Trichomonas) Fortimicin(s) Antibacterial Foscarnet sodium Antiviral (HIV-1) Fosetyl Al Systemic fungicide Fungichromin Topical antifungal Gallic acid Astringent, styptic Gentian violet Topical anti-infective Gluconolactone Cleaner Gossypol Rubber antioxidant Heparin Anticoagulant Hexamethylolmelamine Fireproofing agent Mexamidine Antiseptic, anti-acne Homatropine Anticholinergic (ophtalmic) Hydrastinine hydrochloride Uterine hemostatic Hydrocortisone phosphate, Glucocorticoid disodium salt Hydroquinine hydrochloride Depigmentor hemihydrate Hydroxyamphetamine Androgenic (ophtalmic) hydrobromide Hydroxybutyranilide Antioxidant 3-Hydroxycamphor Topical antipruritic 1-(Hydroxymethyl)-5,5- Cosmetic preservative dimethylhydantion 8-Hydroxyquinoline sulfate Antiperspirant, deodorant Iodic acid Astringent Itraconazole Antifungal Kanamycin(s) Antibacterial Kermesic acid Dye Kojic acid Flavor enhancer Laccaic acid Crimson dye Lactic acid Acidulant Litmus Indicator L-Lysine L-glutamate Flavor additive Lyxoflavine Feedstuff, growth- promoter Maclurin Dye Malachite green Dye Maltol Flavor enhancer Maneb Agricultural fungicide Manganese acetate Mordant Meralein sodium Topical anti-infective Plus a host of others, including a wide range of inorganic salts.

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L13: Entry 6 of 8

File: USPT

Dec 24, 1991

DOCUMENT-IDENTIFIER: US 5075427 A

TITLE: Polymer surface modification using aqueous stable diazo solution

Brief Summary Text (3):

The innumerable synthetic polymers which have been prepared, tested and reported in the literature reflect the continuing need to provide materials which have a unique combination of properties. In certain instances polymers have been synthesized in attempts to enhance one or more of their overall or macro properties, such as enhanced tensile strength, inertness to specific environments, porosity and the like. Polymers have been synthesized in attempts to enhance properties required at certain sites of the resultant polymer formation, i.e. surface properties, such as enhanced wettability, adhesion, solvent resistance, herbicidal or pharmaceutical activity and the like. In most instances, the formation of polymers which exhibit enhanced properties at specific sites is not practical or requires costly synthesis. Further, when formed, the newly synthesized polymer has less desirable overall properties than the original non-modified polymer. Thus, the modification of a known synthetic polymer to enhance or modify its properties frequently involves the sacrifice of other desirable properties and, at time, necessitates expensive and complicated procedures and formulations. When surface modification is desired, various methods have been utilized. The surface may be primed with a particular liquid to enhance the treated polymer surface adhesion, wettability or other desired properties. Polyolefins have been subjected to irradiation to enhance their ability to bond to themselves when subjected to heat and pressure in the presence of free radical generating compounds. Other methods of modifying surfaces of preformed polymer articles are well known and include surface degradation, swelling with weak solvents as well as introduction of reactive inorganic groups such as sulfonic, chlorine groups by subjecting the formed polymer article to reactive baths to cause reaction between the polymer article's surface and the reactive moiety. Each of these means of modifying the surface of a polymer article is cumbersome and is limited to a very small range of polymer substrates and modifying reactants. In addition, chemical modification of solid surfaces poses unique problems as compared to chemical reactions in solution or in dispersion. The solid surface is never entirely uniform, and the orientation of molecules at the solid surface is generally restricted, thus limiting their chemical reactivity, and solid surfaces are frequently contaminated with absorbed materials, such as carbon dioxide, water, oxygen, etc., which are frequently very difficult to remove. Atmospheric contamination of a solid surface can present a serious impurity problem in interfacial chemical reactions and can affect the course of the reaction. The reaction kinetics of free radicals in a homogeneous system, e.g. solution, are greatly different from the reaction kinetics of free radicals in a heterogeneous system, e.g. a solid surface. Since a solid surface differs from a solution in physical, thermodynamic and free energy characteristics, the field of chemical reactions involving solid surfaces has been under recent investigation as a separate and distinct discipline.

Brief Summary Text (11):

The subject composition and process can utilize a wide variety of diazo or polydiazo compounds. These compounds are provided by compounds having at least one primary amino group which is bonded to an alpha, non-aromatic carbon atom having a hydrogen atom associated therewith as represented by the following formula: ##STR1## wherein R.sub.1 independently represents an organic group which may be selected from alkyl (i.e. methyl, ethyl, propyl, butyl, pentyl and the like with C.sub.1 -C.sub.10 alkyl

being preferred and C.sub.1 -C.sub.5 alkyl being most preferred), alkaryl (i.e. benzyl and the like), aryl (i.e. phenyl, naphthyl and the like), cyclic hydrocarbon (i.e. cyclopentyl, cyclohexyl and the like), heterocyclic hydrocarbon (i.e. containing oxygen, nitrogen or sulfur within the ring) or heteroalkyl (i.e. containing at least one ether, secondary or tertiary amino or a sulfide group within the chain). Further, R.sub.1 can be selected from active groups which are directly bonded to the alpha, non-aromatic carbon or such active groups can, alternately, be substituted on the organic group described above. The term "active group", as used herein and in the appended claims refers to a chemical group having the activity desired to be imparted to the polymer being modified by the present invention. Such active group can be selected from nitriles, esters of carboxylic acids (preferably a C.sub.1 -C.sub.5 ester group), hydroxyl, alkoxy (i.e. ethers), polyalkoxy (i.e. polyalkyleneoxide), halogen (preferably fluorine or chlorine) as well as complex organic groups (a poly heterocyclic and/or cycloalkyl) such as pharmaceuticals, herbicidal and the like active groups. The group can be chosen based on the activity to be imparted to the polymer surface, the availability of forming or obtaining the above amine compound having said active group and the ability of the amine compound to exhibit solubility in aqueous solutions.

Brief Summary Text (35):

It is known that the solid surfaces of polymers which contain a plurality of non-aromatic carbon-hydrogen bonds can be modified by reacting with a divalent carbon species, such as provided by the dissociation of a diazo compound. Although not meant to be a limitation on the subject invention, the reaction can be viewed as either an insertion or hydrogen abstraction mechanism or carbenium ion substitution. Polymers which contain non-aromatic (i.e. aliphatic, heterocyclic and alicyclic) carbon-hydrogen bonds within the polymer structure are well known. For the purpose of this invention, the most useful polymers are those in which the carbon atoms of the carbon-hydrogen bonds do not constitute a part of an aromatic ring system and in which at least 50 percent of the non-aromatic carbon atoms of the polymer contain at least one such carbon-hydrogen bond. Saturated or unsaturated aliphatic homopolymers or interpolymers, including aliphatic, cycloaliphatic and mixed aromatic-aliphatic polymers are the most preferred, as exemplified by polyvinyl chloride, casein, polyvinylidene chloride, polypropylene, polyethylene, polymethyl siloxane, polystyrene, vinyl chloride-vinylidene fluoride copolymer, natural rubber, styrene-acrylic acid copolymer, gelatin, cellulose acetate, polyacetal, polyethylene terephthalate, cellophane, ethylene-propylene copolymers, polyvinyl fluoride, polyvinyl chloride, polyvinyl alcohol, polyvinyl ethers, acrylate and methacrylate polymers and copolymers, polybutadiene, etc. In addition to the reaction of the divalent carbon species with the carbon-hydrogen bonds, the presence of unsaturated linkages, hydroxyl, amine, ether groups and the like, in the polymer also provides sites which can be attacked by the divalent carbon species as is known.

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TITLE: Water soluble films of polyvinyl alcohol and polyacrylic acid and packages comprising same

Brief Summary Text (5):

Packaging materials formed from film-forming materials which are water soluble have been used for many years for packaging water soluble or dispersible dry, solid materials which may be toxic or otherwise harmful to the user or which may be difficult to weigh out in accurate portions, or simply for the convenience of the user. Examples of typical materials used in aqueous environments which have been packaged or proposed for packaging in water soluble films include, for example, cleaning products, such as laundry detergents, bleaches, and caustic cleansers; pesticides, such as herbicides, fungicides, insecticides, and nematocides which are applied as aqueous sprays; and various other pulverulent water soluble or dispersible chemicals, such as carbon black, pigments, dyes, etc; food products, and the like.

Detailed Description Text (25):

The mechanism of aging stabilization against further hydrolysis can be represented by the following formula: ##STR2## where formula (III) shows the interference H-bonding between the polyacrylic acid and polyvinyl alcohol. The hydrogen bonded structure (III) interferes sterically and electronically with continuing hydrolysis (as well as internal H-bonding) of the polyvinyl alcohol (I) which thereby prevents the conformational perfection of structure (I-A) which would result in high order crystallinity and insolubilization.